

REMARKS

Claims 1, 2, 4, 7-11, 13-15, 17-20, 22-24 have been amended. Applicants respectfully submit that claims 1-24 are in condition for allowance.

102(e) Rejections

The Examiner has rejected claims 1-2, 15-17, 19-22 and 24 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 6,654,383 (hereinafter "Haymes").

Claim 1

Applicants respectfully submit that all of the limitations required by independent claim 1, as amended are not identified in Haymes.

First, Haymes does not describe an intermediate device "to be coupled between a storage protocol controller and at least one storage device."

In general, Haymes does not contemplate protocol communication between an intermediate device and a storage device. Haymes describes "A data framer capable of supporting at least two different data framing protocols potentially present in a source data stream..." (Abstract). As made clear from Haymes' exemplary embodiments, Haymes is meant to address the "data stream" between computer processing systems over a network using e.g. WAN via SONET, Ethernet, or Fibre channel (FC) protocols or LAN via Ethernet or FC protocols.

In one such embodiment, Haymes describes at column 11, line 38 to column 12, line 8, and Fig. 5, that the data framer is "implemented...in accordance with a processing system 500, including a controller or processor 502, memory 504 and a user interface 506." Haymes does not describe a storage controller as required by the claim. It is clear in this implementation that the data framer is meant to detect protocols from the "data stream" received over a WAN or LAN at the processing system 500, and not from the memory 504. The WAN and LAN protocols described in Haymes are not used to communicate between a storage protocol controller and a storage device, thus Haymes' data transmission system 100 is not "coupled between a storage protocol controller and at least one storage device" The memory 504 is only described as storing and loading (e.g. to RAM) software to perform the WAN and LAN detection that Haymes describes. (Haymes, column 11, lines 63-67).

Second, Haymes does not describe, "protocol sensing circuitry to determine which one of the plurality of storage protocols the at least one storage device is capable of communicating". Haymes' data transmission system is implemented with a processor system and coupled to a WAN or LAN network. Haymes may detect which WAN or LAN protocol is being received at the processor system but it does not determine the storage protocol that the memory device 504 is capable of communicating. Similarly, because Haymes describes communication via a network protocols and not a storage protocols, and Haymes does not determine the storage protocol that the storage device uses to communicate, Haymes does not describe, "the flow control circuitry to control a

data stream between the at least one storage device and the storage protocol controller, wherein the data stream includes the communication protocol determined by the protocol sensing circuitry."

Thus, Applicants respectfully submit that Haymes does not teach what amended claim 1 requires. Claims 2-8 are dependant on claims 1 and are allowable for at least the same reason.

Claims 15 and 20

As discussed above, Haymes is about detecting which network protocol is being received at a network node over a WAN or LAN.

As such, Haymes does not describe, "an intermediate device supporting a plurality of storage protocols, which one of the plurality of storage protocols at least one storage device coupled with the intermediate device is capable of communicating." Also stated above, Haymes only mention of the memory 504 was to store software related to the data transmission system 100.

Numerous other limitations of amended claim 15 are not identified because Haymes does not address, "modifying, at least in part by the intermediate device, at least one data stream communicated in accordance with the one storage protocol from said at least one storage device to a storage protocol controller."

Thus, Applicants respectfully submit that Haymes does not teach what amended claims 15 and 20 require. Claims 16-19 and 21-24 are dependant on claims 15 and 20 and are allowable for at least the same reason.

103(a) Rejections

The Examiner has rejected claims 3-4, 6, 18 and 23 under 35 U.S.C. §103(a) as being anticipated over Haymes as applied to claims 1, 15 and 20 above, and further in view of US Patent 6,915,363 (Hereinafter Wood).

Applicants respectfully submit that Haymes does not teach what amended claims 1, 15 and 20 require. Claims 2-8, 16-19 and 21-24 are dependant on claims 1, 15 and 20 respectively and are allowable for at least the same reason.

The Examiner has rejected claims 5, 7, 9-11 and 13 under 35 U.S.C. §103(a) as being anticipated over Haymes as applied to claims 1, 15 and 20 above, and further in view of "Parallel vs. SATA".

Claim 9

With respect to amended claim 9, Applicant respectfully submits that the combination of Haymes and "Parallel vs. SATA" does not describe what the claim requires.

"Parallel vs. Serial ATA" describes some of the hardware differences between parallel ATA (PATA) and serial ATA (SATA) devices and cables. The article suggests configurations using an adapter for connecting a SATA device to a motherboard configured for communication with PATA devices.

First, Haymes does not teach the limitations of amended claims 1, 15 and 20. Second, "Parallel vs. SATA" at least does not describe, "...a storage protocol controller capable of communicating in accordance with a plurality of storage

protocols..." Rather, "Parallel vs. SATA" describes at page 2, "motherboards with onboard SATA adapters" to allow communication between a Parallel ATA (PATA) hard drive and a motherboard. An adapter must be used on the motherboard because the motherboard described in the article cannot communicate "...in accordance with a plurality of different communication protocols..." it can only communicate using the PATA protocol.

Haymes describes communication between a host computer (implementing the data transmission system which enables communication in multiple protocols) and a remote node over a WAN or LAN. Parallel vs. ATA describes communication between a host computer and a storage device over a storage bus using one storage protocol. In Parallel vs. SATA, the use of a second protocol is only enabled with an adapter, external to the motherboard of the host computer.

Thus, the combination of Haymes and "Parallel vs. SATA" describes a host computer connected between a storage device over a storage bus (Parallel vs. SATA) and a network node over a WAN or LAN (Haymes). The host computer is capable of communicating over the storage bus using a single storage protocol (Parallel vs. SATA). The host computer is capable of communicating over the WAN or LAN using a plurality of WAN or LAN protocols (Haymes).

The combination of Haymes and "Parallel vs. SATA" does not describe, "at least one storage protocol controller capable of communicating in accordance with a plurality of storage protocols, the at least one storage protocol controller

being capable of being coupled with a bus; a storage enclosure including a plurality of storage devices, wherein two or more of the storage devices are combined in a Redundant Array of Inexpensive Disk (RAID) configuration, and each storage device is capable of communicating in accordance with one of Serial Attached SCSI (SAS), Serial Advanced Technology Attachment (SATA) and Fibre Channel (FC) storage protocol; an intermediate device coupled between the storage protocol controller and at least one of the plurality of storage devices, and capable of communicating in accordance with a plurality of storage protocols, and including, protocol sensing circuitry to determine which one of the plurality of storage protocols the at least one storage device is capable of communicating, and flow control circuitry to control a data stream between the at least one storage device and the storage protocol controller, wherein the data stream includes the storage protocol determined by the protocol sensing circuitry.

”(Emphasis added)

Thus, Applicant respectfully submits that the combination of Haymes and “Parallel vs. SATA” does not describe what independent claim 9 requires. Claims 10-14 are dependent on claim 9 and are allowable for at least the same reason.

Claims 5 and 7

Applicants respectfully submit that Haymes does not teach what amended claims 1, 15 and 20 require. Claims 2-8, 16-19 and 21-24 are dependant on claims 1, 15 and 20 respectively and are allowable for at least the same reason.

The Office Action has rejected claim 8 under 35 U.S.C. §103(a) as being anticipated over Haymes as applied to claims 1, 15 and 20 above, and further in view of "Fibre Channel Tutorial". Applicants respectfully submit that Haymes does not teach what claims 1, 15 and 20 require. Claims 2-8, 16-19 and 21-24 are dependant on claims 1, 15 and 20 respectively and are allowable for at least the same reason.

The Examiner has rejected claims 12 and 14 under 35 U.S.C. §103(a) as being anticipated over Haymes in view of Parallel vs. SATA as applied to claims 5 and 9-11, and further in view of Wood. Applicant respectfully submits that the combination of Haymes and "Parallel vs. SATA" does not describe what independent claim 9 requires. Claims 10-14 are dependent on claim 9 and are allowable for at least the same reason.

Accordingly, Applicant respectfully submits that the official notice has been traversed and requests references or affidavit be provided under MPEP 2144.03.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance. Therefore, allowance at an early date is earnestly solicited.

The Examiner is invited to initiate an interview with the undersigned by calling 949-498-0601 if the Examiner believes that such an interview will advance prosecution of this application.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 50-0221.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: April 14, 2006


Daniel M. De Vos
Reg. No. 37,813

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025-1026
(408) 720-8300